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REPORT NO. 12

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PROCUREMENT SECTION  
CURRENT SERIAL RECORDS

## Cotton Fiber and Processing Test Results

CROP of

1971



Consumer and Marketing Service  
U.S. DEPARTMENT OF AGRICULTURE  
Memphis, Tenn. 38117 January 21, 1972

This is the twelfth of a series of reports of fiber and processing test results from the 1971 cotton crop. Subsequent reports in this series will follow at approximately two-week intervals during the harvesting season, and will be summarized in a comprehensive report at the end of the season. This series will present data on the same subject as "Summary of Cotton Fiber and Processing Test Results, Crop of 1970", March 1971. These reports are published by the Standardization Section, Cotton Division, Consumer and Marketing Service, U. S. Department of Agriculture, P. O. Box 17723, Memphis, TN 38117.



## COTTON FIBER AND PROCESSING TEST RESULTS, CROP OF 1971

### Discussion of Test Results

Cotton testing laboratories of the Consumer and Marketing Service, USDA, report that fibers from Southwestern short staple samples tested through January 4, 1972 are finer and weaker than through the same date last season. Shirley Analyzer nonlint content and picker and card waste are higher. Yarns spun from these samples are weaker and have more imperfections. Average spinning potential yarn number is lower than last season.

Averages for all medium staple samples tested through January 14 show a weaker zero gage fiber strength while 1/8-inch gage fiber strength is the same as a year ago. Yarns spun from these samples show higher appearance grades.

No additional spinning lots were received from the Southeast during this report period or the comparable period a year ago.

South Central medium staple samples are finer than through the same period last season. Yarns spun from these samples show higher appearance grades. No additional samples were received during this report period this season.

Medium staple samples from the Southwest are weaker and less uniform than a year ago. Yarns spun from these samples are weaker. Average spinning potential yarn number is lower than last season.

Medium staple samples from the West are longer than a year ago. Yarns spun from these samples show higher appearance grades.

Averages for all long staple samples tested, not including roller ginned, are finer, less uniform and weaker than last season. Shirley Analyzer nonlint content and comber waste are lower while picker and card waste is higher. Yarns spun from these samples are weaker with higher appearance grades and fewer imperfections.

No additional Southeast or South Central long staple samples were received during this report period.

Long staple samples from the West are shorter, finer and weaker at 1/8-inch gage fiber strength than a year ago. Shirley Analyzer nonlint content is lower while picker and card waste and comber waste are higher. Yarns spun from these samples are weaker with higher appearance grades and fewer imperfections. Average spinning potential yarn number is higher than last season.

No additional American Upland extra long staple samples were received during this report period.

Extra long staple, American Pima, samples from the West are shorter, coarser, and weaker at 1/8-inch gage fiber strength than a year ago. Shirley Analyzer nonlint content is lower. Yarns spun from these samples are weaker than last season.

Table 1.--Cotton: Averages of fiber and processing tests from selected gin points in the United States  
1/  
through January 14, 1972

Staple group Area, and Crop year	Lots tested	Fiber test results						Processing test results					
		Fibrograph		Mike fine- ness	Fiber strength		S A nonlint	P & C waste	Yarn quality			Spin. Potent.	
		2.5% span	50/2.5 unif.		Zero gage	1/8" gage			Skein str.	Appear- ance	Imperf- ections		
				Inches			Pct.	Rdg.				Mpsi	G/tex
		No.	22s		Carded	Yarn			Yarn No.				
<u>Short Staple:</u> Southwest 1970 1971	63	0.94	46	4.3	86	21	3.2	6.0	93	114	29	43	
	49	0.95	45	4.0	79	20	4.4	7.2	85	115	37	38	
<u>Medium Staple:</u> Southeast 1970 1971	83	1.07	45	4.4	83	23	3.6	6.7	102	101	18	60	
	67	1.08	45	4.4	79	22	3.4	6.6	99	109	20	61	
South Central 1970 1971	171	1.09	45	4.5	82	22	3.2	6.2	102	106	22	61	
	142	1.10	44	4.3	81	22	3.0	5.9	103	112	20	62	
Southwest 1970 1971	66	1.06	46	4.2	87	23	3.2	6.3	106	113	29	62	
	40	1.05	44	4.1	84	22	3.6	6.3	102	116	29	56	
West 1970 1971	70	1.10	45	4.2	93	25	2.7	5.7	118	113	25	70	
	60	1.12	45	4.2	92	25	2.7	5.3	121	120	24	70	
U. S. Average 1970 1971	390	1.08	45	4.4	85	23	3.2	6.2	106	107	21	63	
	309	1.09	44	4.3	83	23	3.1	6.0	105	113	22	63	
Significant dif- ference 2/		0.02	2	0.2	2	1	0.5	0.5	4(22s)	5	2	3	

1/  
2/ Based on a limited number of samples of modal quality

Minimum differences considered to be significant for comparisons in this table. These guides are based upon averages of a number of lots and are not applicable to individual samples.

Table 1.--Cotton:

Averages of fiber and processing tests from selected gin points in the United States  
through January 14, 1972

1/ (Continued)

Staple group, Area, and Crop year	Lots	Fiber Test Results						Processing Test Results										SPY
		Length		Unif	Mike	Strength Zero 1/8" gage gage		SA Non- lint	P&C Waste	Pct.	Comber Waste	Yarn Quality						
												Strength		Appearance		Imprfctns		
		Span	In.	Pct.	Rdg.	Mpsi	G/tx	Pct.	Lbs. carded	Lbs. combed	Lbs. carded	Indx	Indx	combed	card	comb	No.	
<u>Long Staple:</u>																		
Southeast																		
1970	14	1.14	45	4.7	82	23	4.5	8.6	18.5	109	122	103	100	21	11	65		
1971	16	1.14	43	4.3	79	22	4.2	9.7	17.2	102	118	109	118	22	10	65		
South Central																		
1970	6	1.16	42	4.6	85	24	4.5	9.2	20.0	102	124	93	115	26	10	62		
1971	3	1.22	43	4.5	83	24	5.3	9.6	16.4	113	130	107	117	20	9	70		
West																		
1970	20	1.18	45	3.7	92	27	3.5	8.2	16.0	134	152	86	94	43	26	75		
1971	14	1.16	44	3.5	92	26	2.4	8.7	16.9	128	146	96	104	25	15	78		
U. S. Average																		
1970	40	1.16	45	4.2	87	25	4.0	8.5	17.5	120	137	93	99	33	18	70		
1971	33	1.16	43	4.0	85	24	3.5	9.3	17.0	114	131	103	112	23	12	71		
<u>Extra Long Staple:</u>																		
West																		
1970	3	1.41	32	3.8	112	35	2.5	7.7	18.2		71		103		7			
1971	2	1.41	30	4.0	105	30	2.0	8.2	16.0		66		100		10			
West																		
1970	18	1.48	31	3.6	100	34	3.5	8.0	17.7		70		110		4			
1971	21	1.45	31	3.8	99	33	2.7	8.4	17.6		65		113		3			
Significant Difference 2/																		
0.02 2 0.2 2 1 0.5 0.5 0.5 4(22s) 4(22s) 5 5 2 2 3																		

1/ Based on a limited number of samples of modal quality

2/ Minimum differences considered to be significant for comparisons in this table. These guides are based upon averages of a number of lots and are not applicable to individual samples.



Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1971

Production Area, Classification & Sample Number					Fiber Test Results							Processing Test Results - Carded Yarns												
No	Grade	Name & Code	Stple	32s	Digital Fibrograph		Mike	Fiber Strength		Elon-gat'n 1/8"	S.A. Non-lint	Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Potent-ial	
					2.5% span	Unif		Zero Gage	1/8" Gage			Pct	Pct		Gra	Yel	8s or 74 tx	22sor 27 tx	8s or 74 tx	22sor 27 tx	8s or 74 tx	22sor 27 tx		
SOUTHWEST NORTHWEST TEXAS																								
ANSON																								
1	SLM	LT SP	42	30	0.97	43	3.5	73	20	LANKART 611	8.6	4.2	3	4	100 PERCENT	86	8.2	7.2	120	120	64	37	42	
BIG SPRING																								
1	MID	LT SP	32	30	0.96	43	3.0	75	19	WEST STORMPROOF	6.6	3.2	2	4	95 PERCENT	79	6.5	5.9	120	110	65	39	39	
2	SLM	LT SP	42	30	0.92	44	3.0	74	19		7.0	6.8	3	4	7.9	82	7.1	6.4	120	120	61	36	41	
COLEMAN																								
1	LM	LT SP	152	30	1.00	44	4.3	75	20	LANKART 57	7.4	4.8	4	4	90 PERCENT	81	7.4	6.4	120	110	53	33	38	
COTTON CENTER																								
3	LM	LT SP	152	30	0.89	43	2.8	79	22	STRIPPER 31	7.4	4.8	3	3	85 PERCENT	88	7.2	6.5	110	110	106	74	36	
HAMLIN																								
1	SLM	LT SP	42	31	0.98	43	2.8	71	20	LANKART 57	8.4	4.4	3	4	70 PERCENT	85	8.3	6.8	120	110	54	40	43	
LAMESA																								
2	SLM	LT SP	242	30	0.90	45	2.9	76	20	BLIGHTMASTER A5	7.6	3.1	3	5	75 PERCENT	83	7.8	7.1	120	120	58	39	35	
PADUCAH																								
1	SLM	LT SP	42	31	1.01	44	3.7	80	20	LANKART 57	7.2	4.0	4	4	90 PERCENT	86	7.6	6.4	120	110	65	36	46	
PLAINVIEW																								
2	LM	LT SP	52	30	0.95	45	3.0	76	19	PAYMASTER 18	6.6	6.4	3	3	80 PERCENT	85	7.0	6.3	120	110	77	50	36	
TULIA																								
1	SLM	LT SP	142	29	0.89	44	3.0	82	20	STRIPPER 31	6.3	4.2	3	3	90 PERCENT	84	7.2	6.0	120	120	52	29	38	
OKLAHOMA																								
ALTUS																								
1	SLM	LT SP	42	32	0.99	43	4.2	82	21	LANKART 57	7.0	3.8	4	4	100 PERCENT	88	7.1	6.4	120	120	42	21	46	
SAYRE																								
1	SLM	LT SP	42	30	0.92	44	3.2	87	21	LANKART 611	6.8	4.2	3	4	70 PERCENT	87	6.3	6.1	120	110	61	35	37	
SNYDER																								
1	SLM	LT SP	42	32	0.99	46	4.7	76	21	LANKART 57	7.2	2.7	3	3	100 PERCENT	86	7.4	6.2	120	120	35	25	44	
NEW MEXICO																								
CAUSEY																								
2	LM	LT SP	152	29	0.88	45	2.9	82	20	GREGG 35	5.9	6.6	3	4	75 PERCENT	86	6.7	5.9	110	110	99	61	33	
PORTALES																								
3	LM	LT SP	152	29	0.85	45	2.9	82	21	RILCOT 90	6.7	7.2	4	4	80 PERCENT	86	7.1	6.3	110	110	81	52	30	

1/ Reduced from 42 because of bark 2/ Reduced from 32 because of bark

1/ Reduced from 42 because of bark 2/ Reduced from 32 because of bark



Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1971

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns										
Sample Number		Grade	Name & Code	Stple	Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint	Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfect's		Spin. Potent- ial	
					2.5% span	Unif.		Zero Gage	1/8" Gage			Pct	Pct		Gra	Yel	22s or 27 tx	Lbs	Pct	22s or 27 tx	50s or 12 tx	22s or 27 tx		50s or 12 tx
No				32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Lbs	Pct	Pct	No	No	No	No	No		
SOUTHWEST NORTHWEST TEXAS																								
LUBBOCK																								
2	LM	LT	SP	1/52	30	0.95	44	2.9	77	20	7.5	3.9	4	4	75 PERCENT	31	6.6	4.6	100	80	64	48	45	
O'DONNELL																								
2	LM	LT	SP	1/52	31	0.90	44	3.0	79	21	7.4	4.9	4	4	80 PERCENT	26	6.4	4.2	110	80	46	35	40	
RAYLAND																								
1	SLM	LT	SP	42	34	1.06	45	4.2	85	24	6.4	4.7	3	3	100 PERCENT	37	5.8	4.3	120	90	29	18	62	
ROPEVILLE																								
1	SLM	LT	SP	42	32	1.03	43	2.7	78	21	7.4	5.6	3	3	100 PERCENT	34	6.9	4.9	90	70	77	56	52	
2	SLM	LT	SP	42	32	1.03	42	2.7	80	21	7.7	4.4	2	3	6.6	100	35	7.1	5.2	90	70	67	50	52
SEMINOLE																								
1	SLM	LT	SP	42	30	0.96	43	3.1	82	21	6.9	3.4	3	4	80 PERCENT	27	6.0	3.9	110	90	31	26	44	
2	LM	LT	SP	1/52	30	0.95	43	2.7	83	23	7.2	6.2	3	4	9.0	103	36	6.4	4.6	100	70	69	50	46
SLATON																								
3	LM	LT	SP	1/52	33	1.06	43	3.0	80	22	7.4	7.2	3	3	100 PERCENT	35	7.0	5.0	90	80	67	41	50	
VERNON																								
1	LM			51	34	1.07	45	4.1	86	23	6.4	4.7	4	3	100 PERCENT	39	6.2	4.4	120	90	29	17	64	

Table 4 --Cotton, American upland long staple: Quality characteristics by production areas, crop of 1971

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns										Spin. Poten- tial																							
				Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint	Color Raw Stock		P & C Comber and Waste		Strength		Elongation		Appearance Index		Imprfect'ns																										
							Zero Gage	1/8" Gage			Gra	Yel			22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx		50s or 12 tx																						
				No	Grade	Stple	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Pct	Lbs	Lbs	Pct	Pct	No	No		No	No	No	No																			
																								32s																							No
WESTERN																																														No	
ARIZONA																																														No	
ELFRIDA																																														No	
3	MID LT SP	32	36	1.17	43	3.7	93	24	5.5	2.6	1	4	8.8	124	46	6.8	5.7	90	80	25	20	77																									

1/ 100 percent selected for tests, less than 100 percent in the area

\* Comber Waste and Combed Yarn Data

Table 5 --Cotton, American Pima extra long staple: Quality characteristics by production areas, crop of 1971

Production Area, Classification &			Fiber Test Results										Processing Test Results - Combed Yarns									
Sample Number			Array Length		Mike	Fiber Strength		Elon-gat'n 1/8"	S.A. Non-Lint	Color Raw Stock		P & C Waste	Comber Waste	Strength		Elongation		Appearance Index		Imprfct's		
No	Grade	Stple	UQL	CV		Zero Gage	1/8" Gage			Gra	Yel			Lbs	Pct	Pct	Pct	Pct	Pct	Pct	No	No
Name & Code																						
32s			In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Pct	Pct	Lbs	Lbs	Pct	Pct	No	No	No	

## WESTERN

## ARIZONA

## PEORIA

3

PIMA S-4

100 PERCENT

6.8 3.7 3 5 9.8 18.8 71 39 5.9 5.2 120 110 4 4

## NEW MEXICO

## LAS CRUCES

3

PIMA S-2

100 PERCENT \*

8.3 2.1 3 5 8.5 17.6 66 37 5.8 5.3 110 120 3 3

\* 100 percent selected for tests, less than 100 percent in the area

